

**Notice of Allowability**

Application No.

09/605,044

Applicant(s)

BLACK, DAVID

Examiner

Art Unit

Tuan V. Thai

2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 2/27/2006.
2. ☒ The allowed claim(s) is/are 1-27, 37-39 renumbered as 1-15, 17-22, 24-29, 16, 23, 30 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

TUAN V. THAI  
PRIMARY EXAMINER

Application/Control Number: 09/605,044

-Page 2-

Art Unit: 2186

**Attorney's Docket No.: E0295/7117**

**IN THE UNITED STATES PATENT AND  
TRADEMARK OFFICE**

**In re application of:** Black, Davis                      **Group:** 2186  
**Serial No.:** 09/605,044                      **Examiner:** Tuan Thai  
**For:**                      **METHOD AND APPARATUS FOR MAINTAINING INVENTORY OF  
LOGICAL VOLUMES STORED ON STORAGE ELEMENTS.**

1. This office action is responsive to amendment filed February 27, 2006. Claims 1-27 and 37-39 are presented for examination, and now allowed. Claims 28-36 have been canceled.

**REASONS FOR ALLOWANCE**

2. The following is an Examiner's Statement of Reasons for Allowance:

The prior arts of record do not teach or suggest, alone or in combination, **all** the limitations of the independent claims of the current invention (claims 1, 16 and 22). Particularly, the prior arts of record do not teach a method and apparatus for inventory logical volumes in a computer storage system having plurality of storage elements connected together with a communication network; wherein the method specifically comprises maintaining information identifying each user of the

Art Unit: 2186

corresponding volume for each of a plurality of logical volumes wherein each of the corresponding logical volume having multiple users, using at least a portion of the information to determine at least one of the users of the plurality of logical volumes, and based on the determination of the at least one use made using at least a portion of the identifying information, verifying that the logical volume is still in use (claim 1). The apparatus of storage element comprising a storage medium for storing logical volumes; an access manager module configured to maintain identifying information for each user of the logical volumes stored on the storage medium, wherein the access manager is further configured to maintain information identifying multiple users for each of the logical volumes; and a verifier module coupled to the access manager using at least a portion of the information identifying each user of the logical volumes to determine at least one of the users of at least one of the plurality of logical volumes and based on the determination of at least one user made using the at least a portion of the information identifying each user for performing verification the a logical volume is still in use (claims 16 and 22). In light of the foregoing; claims 1, 16 and 22 of the present application are found to be patentable over the prior arts.

Claims 2-15, 37; 17-21, 38; 23-27 and 39 further limit the allowable independent claims 1, 16 and 22. These claims are

Art Unit: 2186

therefore allowable for the same reason as set forth above.

Any comments considered necessary by Applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan V. Thai whose telephone number is (571)-272-4187. The examiner can normally be reached on from 6:30 A.M. to 4:00 P.M..

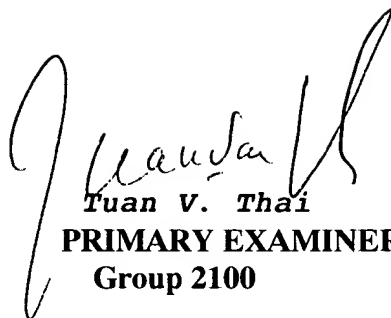
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mathew M. Kim can be reached on (571)-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/605,044

-Page 5-

Art Unit: 2186

**TVT**/March 14, 2006

  
**Tuan V. Thai**  
**PRIMARY EXAMINER**  
**Group 2100**